Split

Work Order ID 61847-2

September 7, 2010 3:22:05 PM

~~70~~ 19

~~70~~ 70 CL 10/9/18

Item ID: D3439-101 **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: Mirror Assembly 8"

Start Date: 9/07/10 **Start Qty:** ~~50.00~~

Required Date: 9/09/10 **Req'd Qty:** 50.00

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** CL **Date:** 10/9/17 **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:**

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3439	~~Rev A~~ B								
100	PURCHASING	0.00							
Purchasing		0.00							
Purchasing	**Memo** Issue P/O: 12524 For Grote Mirror P/N: 12183 Possible Supplier: UAP/NAPA Material release note is required								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
Packaging		0.00							
Packaging	**Memo** Ensure Material Release Note is attached								

P to

CL 10/9/17 50

10/3/10 70

115. → ~~26~~ 6 inspect parts 8 10/09/13

9/04/13

counted x70

P to →

Dart Aerospace Ltd

W/O: 61847	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE Perm. changes.	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/09/13	# 100	- Fix header box Dwg now At "Rev B"	CE	10.10.04			10/09/13
10/09/13	# 15	ADD step For QC & inspection	CE	10.10.04			10/09/13

Part No: D3439-101 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:	WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61847

September 7, 2010 3:22:05 PM

Item ID: D3439-101 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Mirror Assembly 8"

Start Date: 9/07/10 **Start Qty:** 50.00 **Cust Item ID:**

Required Date: 9/09/10 **Req'd Qty:** 50.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Small Fab	0.00				13X	4		
Small Fab									
Small Fab	**Memo**	0.00							
	Discard Hardware.								
	Fabricate stud as per Dwg D3439								
	Pick:								
	Qty Part Number Description Batch								
	1 5/16"-18UNCx1¼" Long Hex Bolt								
	Drill and Tap mirror as per Dwg D3439, then install stud.								
	Coat threaded section of stud with LPS-3								
130	QC5- Inspect part completeness to step on W/O	0.00				X3	4		
QC	**Memo**	0.00							
Quality Control									

per ECN 10.607
+ Discard Hardware
2-Drill + Tap mirror as per dwg D3439, then install stud D3439-3
D3439-3
M.L 10/04/29
PG-7
5/10/01

Dart Aerospace Ltd

W/O:	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3439-101 PAR #: _____ Fault Category: Small Fab NCR: (Yes) No DQA: _____ Date: 10-10-05

Resolution: Scrap Disposition: Scrap QA: N/C Closed: _____ Date: 10/06/2010

NCR: 61847	WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/9/29	#170	Qty x1 mirror was Drilled & tapes cracked when first ~~time~~ using new tooling ~~R.C Hamman error~~. DT9670	CSICHL	- Scrap ~~Destroy~~ give to Eng for show mockups. Identify as scrap & with original B# 61847-2	10/9/29 10/09/29	10/09/29	CSICHL	10/09/29
	RC	RC operator tries to Drill mirror by hand to see what kind of tooling to make. Hamman error.						10/09/29

NOTE: Date & initial all entries

Work Order ID 61847

September 7, 2010 3:22:05 PM

Item ID: D3439-101 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Mirror Assembly 8"

Start Date: 9/07/10 **Start Qty:** 50.00 **Cust Item ID:**

Required Date: 9/09/10 **Req'd Qty:** 50.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Small Fab	0.00				13X	+1		
Small Fab									
Small Fab	**Memo**	0.00							
	Plug drain holes with Sikaflex. Ensure that mirror adheres to housing. Pick: Qty Part Number Description Batch M115114 M.L 10/04/09 A/RN/A Sikaflex-241/-291 Sikaflex expiry date 01/2011								
150	QC5- Inspect part completeness to step on W/O	0.00							
QC									
Quality Control	**Memo**	0.00							
						S.id.l.d.l	(+13)		
160	Identify as per dwg & Stock Location: 226	0.00							
Packaging									
Packaging	**Memo**	0.00							

rdlrdl4 sf 13X

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61847

September 7, 2010 3:22:05 PM

Item ID: D3439-101 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Mirror Assembly 8"

Start Date: 9/07/10 **Start Qty:** 50.00 **Cust Item ID:**

Required Date: 9/09/10 **Req'd Qty:** 50.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00							
Quality Control									

10/10/04 AD

AD 10-10-04

13

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

September 7, 2010 3:22:04 PM

Work Order ID: 61847

Parent Item: D3439-101

Parent Item Name: Mirror Assembly 8"

Start Date: 9/07/10 **Required Date:** 9/09/10

Start Qty: ~~50.00~~ 70 **Required Qty:** 50.00

Comments: IPP A 05.07.20 New issue KJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
12183		Purchased	No			120	Each	0.0000	1	50			
GROTE MIRROR													
5/16WC		Purchased	No			120	Each	1,995.000	1	50			
SS Flat Washer 5/16													

Location	Loc Qty	Loc Code
ST377	1995	
112560	176	
114758	77	
115072	949	
115110	293	
115174 ✓	500	

D3015-3		Manufactured	No			120	Each	582.0000	1	50			
Locknut													

Location	Loc Qty	Loc Code
ST033	582	
43758	26	
56701	3	
58202 ✓	70	
60287	483	

B 61874 ~~HHX~~ 13X m-t 10/04/22

~~HHX~~ 13X m-t 10/04/22

~~HHX~~ 13X m-t 10/04/22

D3439-3 per ECN 10-607

1 each

B 61866 m-t 10/04/22

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

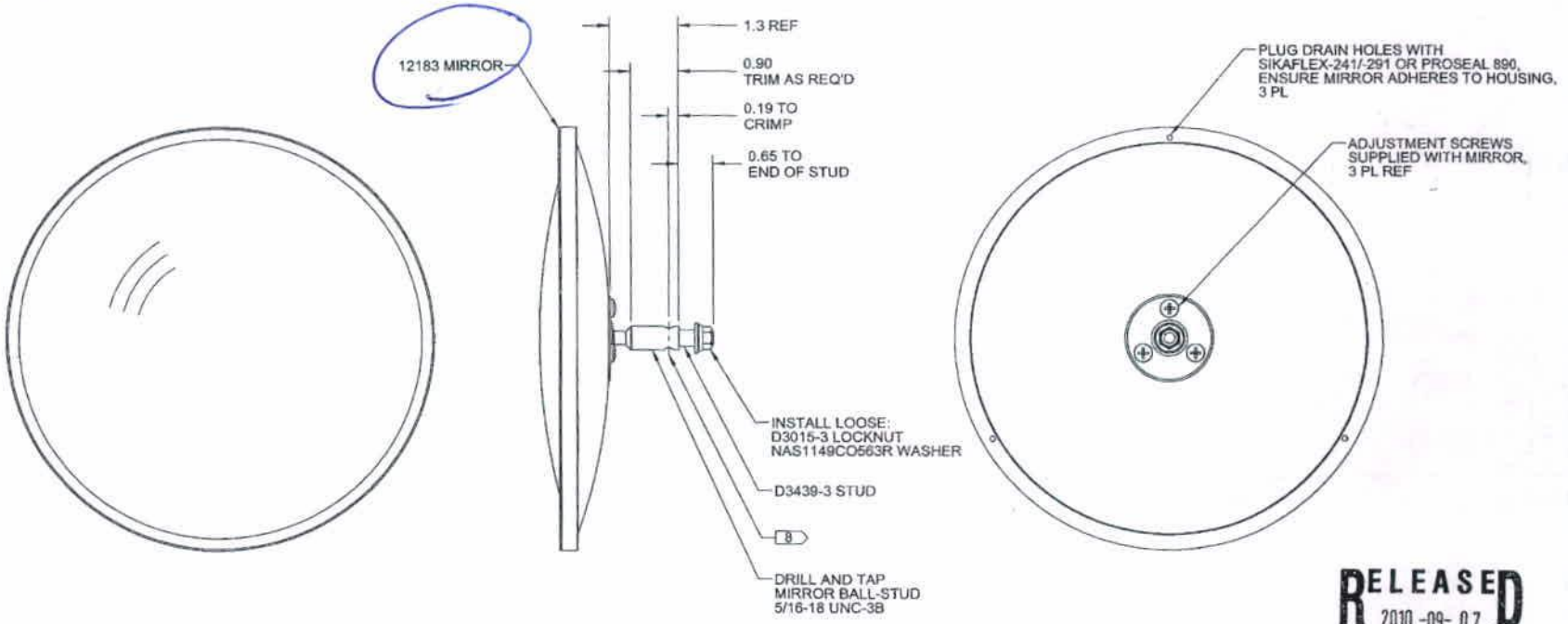
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

CY101917
W10:61847

ITEM	QTY -101	P/N	DESCRIPTION
1	X	D3439-101	MIRROR ASSEMBLY, 8"
2	1	12183	MIRROR 8" (GROTE)
3	1	D3015-3	LOCKNUT
4	1	D3439-3	STUD
5	1	NAS1149CO563R	WASHER (OR AN960JD516)



RELEASED
2010-09-07

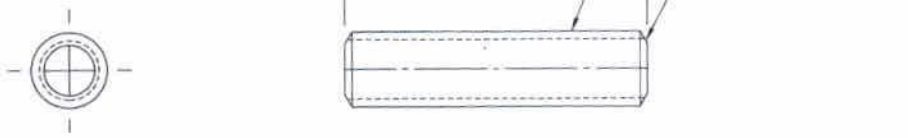
D3439-101 MIRROR ASSEMBLY

NOTES:
1) MATERIAL: MIRROR= 8" ROUND CONVEX MIRROR W/ STAINLESS STEEL CASE
CENTER-MOUNT BALL-STUD W/ 1/4-20 X 1" DEEP FEMALE THREAD
GROTE INDUSTRIES, 2600 LANIER DRIVE, MADISON, INDIANA 47250
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3439-101" USING REMOVEABLE TAG
7) WEIGHT: 1.18 lbs
8) TO INSTALL D3439-3 STUD:
- APPLY LOCKTITE 262 TO THREADS BEING INSTALLED INTO MIRROR BALL-STUD
- THREAD D3439-3 STUD INTO MIRROR BALL-STUD
- CRIMP MIRROR BALL-STUD ON OPPOSING SIDES, 0.19 FROM END AS ILLUSTRATED USING TOOL DT8317
- CRIMP TO DEPTH OF 0.015-0.030 USING R0.125

REV.	DESCRIPTION	BY	DATE
B	REDRAW, ADD -3 (WAS PURCHASED/TRIMMED BOLT), RMV LPS	CP	10.07.20
A	NEW ISSUE	CP	05.05.27

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3439 REV. B
MFG. APPR.		SHEET 1 OF 2
APPROVED		TITLE MIRROR ASSEMBLY SCALE NTS
DE APPR.		
DATE	10.07.20	

COPYRIGHT © 2010 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISCLOSED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



D3439-3 STUD (B)

61847

RELEASED
2010 -09- 07

NOTES:
1) MATERIAL: AISI 303 STAINLESS STEEL ROUND BAR PER ASTM A582
REF DART SPEC M303R
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010
6) IDENTIFICATION: NONE
7) WEIGHT: 0.03 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D3439 REV. B
MFG. APPR.		SHEET 2 OF 2
APPROVED		TITLE MIRROR ASSEMBLY SCALE NTS
DE APPR.		
DATE 10.07.20		COPYRIGHT © 2010 BY DART AEROSPACE LTD

DART aerospace
Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO12524

Purchase Order Date 9/07/10
PO Print Date 9/08/10

Order From : VC-UAP001

UAP HAWKESBURY INC. #074
514 MAIN STREET WEST
HAWKESBURY, ON K6A 2J2
CA

REVISED

Contact Name		**Buyer**	Chantal Lavoie
Vendor Phone	613 632 8575	**Requisition Nbr**	
Vendor Fax	613 632 1539	**Tax Resale Nbr**	10127-2607
Vendor Account Nbr		**Terms**	Net 30
		Currency	CAD
		FOB	

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED 9/10/9/8

Line Nbr	Reference / Revision ID / Vendor Part Number	Description / Mfg ID	Req Date / Taxable	Req. Qty / Unit of Measure	Ship Method	Unit Price	Extended Price
1	12183	GROTE MIRROR	9/09/10 Yes	70.00 Each	Yours ppd	$20.9000	$1,463.00

Special Inst: AS PER DWG D3439 REV. A
B61847
GROTE MIRROR P/N: 12183

PO Total: **$1,463.00**

CERTIFICATE OF CONFORMITY
REQ'D UPON DELIVERY

No substitution or deviation without consent.
Certificate of Conformity or Material Certification required when applicable

Change Nbr: 2 **Change Date:** 9/08/10

NAPA

DANGEROUS GOODS PERMIT
EXPIRY DATE:
PERMIS RELATIF AUX MARCHANDISES DANGEREUSES.
DATE D'EXPIRATION:

EMERGENCY TELEPHONE NUMBER 24 HOURS
CANUTEC 613-996-6666
NUMÉRO DE TÉLÉPHONE D'URGENCE 24 HEURES
CANUTEC 613-996-6666

ACCT # N° COMPTE	SOLD TO / VENDU À	DATE	TIME HEURE	STORE # N° MAGASIN	EMP # N° EMPL.	INVOICE NO. N° FACTURE
					31	

SR #

AD

PURCHASE ORDER # / N° BON DE COMMANDE

ATTENTION

TAX EXEMPTION : / EXEMPTION DE TAXE :

TERMS : / CONDITIONS :

DELIVERY : / LIVRAISON :

PART NUMBER / N° PIÈCE	LN	DESCRIPTION	QUANTITY QUANTITE	PRICE / PRIX	NET	TOTAL
12183			50.00			
12183			20.00			

S 10/04/13

en arrière

S. Willems

SIGNATURE

ALL GOODS RETURNED MUST BE ACCOMPANIED BY THIS INVOICE
TOUTE MARCHANDISE RETOURNÉE DOIT ÊTRE ACCOMPAGNÉE DE CETTE FACTURE